

FORRESTER®

# The Total Economic Impact™ Of The Rancher Prime Enterprise Kubernetes Management Platform

Cost Savings And Business Benefits  
Enabled By Rancher Prime

**DECEMBER 2022**

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## ABOUT FORRESTER CONSULTING

Forrester provides independent and objective research-based consulting to help leaders deliver key transformation outcomes. Fueled by our customer-obsessed research, Forrester’s seasoned consultants partner with leaders to execute on their priorities using a unique engagement model that tailors to diverse needs and ensures lasting impact. For more information, visit [forrester.com/consulting](https://forrester.com/consulting).

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## Executive Summary

Rancher Prime helps enterprises simplify the management of Kubernetes at scale. It is deployed by global enterprises looking to modernize their infrastructure and run their container environments from on-prem to the cloud or at the edge. Rancher Prime delivers efficiency across organization's container workloads and it helps organizations with their cloud-native infrastructure as their needs grow by providing the insights, data and platform required to reduce overall cost, accelerate time to market and improve talent engagement.

[Rancher Prime](#) is an enterprise container management platform for organizations adopting Kubernetes. Owned and developed by SUSE, Rancher Prime addresses the operational and security challenges of managing multiple Kubernetes clusters while providing DevOps and IT Ops teams with integrated tools for running containerized workloads. Rancher Prime provides simple, consistent cluster operations, including provisioning, version management, visibility, diagnostics, monitoring and alerting, and centralized audit.

SUSE commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Rancher. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Rancher Prime on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed six respondents and surveyed 25 respondents with experience using Rancher Prime. For the purposes of this study, Forrester aggregated the experiences of the interviewees and survey respondents and combined the results into a single [composite organization](#) that is a global technology manufacturing organization with 50 data centers.

Prior to using Rancher Prime, these interviewees noted how their organizations' developers relied on the central DevOps team for cluster setup and monitoring which hindered innovation and

### KEY STATISTICS



Return on investment (ROI)  
**200%**



Net present value (NPV)  
**\$4.1M**

development velocity. They lacked application portability and could not easily detect and remediate node failures, leading to frequent system downtime. Manual processes bogged down platform architects during new project setup, while the lack of consistent user access and security policies for all Kubernetes clusters exposed cloud-native workloads to unauthorized access.

After the investment in Rancher Prime, the interviewees reported that their organizations could deliver Kubernetes as a Service to development teams and allowed for the seamless deployment of their containerized workloads on any platform. As a result, developers could easily shift between running applications in the cloud or on-premises, making applications portable between platforms.

Key results from the investment included the ability to quickly detect and remediate node failures, cost savings from the more consistent use of auto-scaling, the rollout of consistent security policies for all Kubernetes clusters, more automated DevOps processes, and improved development velocity.

## KEY FINDINGS

**Quantified benefits.** Three-year, risk-adjusted present value (PV) quantified benefits for the composite organization include:

- **Increased speed of deploying and managing new microservices.** Rancher Prime empowers developers at the composite organization to quickly spin up Kubernetes clusters without relying on the central DevOps team to provide this service. Additionally, the organization sees a reduction in their developers' workloads from leveraging Rancher Prime for automated monitoring of resources and cluster health. By eliminating manual tasks, Rancher Prime frees up developers to spend more time developing rather than configuring. These efficiencies are worth \$2.1 million to the composite organization.
- **Reduced number of application outages.** Following the rollout of Rancher Prime to development teams, the composite organization can prevent multiple application outages. Rancher Prime's support of multi-master deployments and its capability to automatically roll back and recover failed nodes creates a more stable application environment and reduces downtime of mission-critical applications. Cost savings from improved application stability are worth over \$1.87 million to the composite organization.
- **Reduced total cost of ownership.** The composite organization can eliminate costs they previously incurred. By reducing the reliance on other solutions that were redundant with capabilities Rancher Prime provided and by better utilizing existing data center hardware, the organization can save on software licenses, subscription fees and cloud computing costs. Additionally, Rancher Prime makes it easy for developers to leverage Kubernetes' native auto-scaler utility, further reducing ongoing IT

**“SUSE's approach of open source, multi cluster, and multi-location was a perfect fit. Some vendors promoted Kubernetes on scaling up big clusters with hundreds and thousands of nodes and having the scalability within the cluster. In our discussions with SUSE, we realized that scaling up with the number of clusters and managing these clusters on an additional layer fit our use case perfectly.”**

*KaaS platform architect, technology manufacturing*

infrastructure costs. This benefit is worth over \$862,000 to the composite organization.

- **Improved efficiencies for platform architects and DevOps.** Administrative tasks like patching, upgrades, deploying new microservices, providing logs and other resources to developers, and spinning up new clusters are among the functions the composite organization's central DevOps team can either automate or allow developers to perform via the user interface (UI) in Rancher Prime. Additionally, site reliability engineers (SREs) can offload the burden of monitoring application health and cluster performance to developers. These efficiencies add up to \$679,300 for the composite organization.
- **Cost savings from the automated deployment and update of edge devices.** The composite organization leverages Rancher Prime's service everywhere approach of continuous deployment versus scheduled updates and saves 90% of desktop support engineers' time while deploying and updating IoT devices. Additionally, single-board edge devices are much cheaper and easier to maintain than a multi-purpose environment or personal computers. Savings on

hardware, from having one orchestration layer to manage all of their clusters in the cloud, and running specialized edge devices in the same management cluster creates efficiencies worth over \$405,800 to the composite organization.

- **Accelerated onboarding of new developers.** The composite organization can hire more junior developers and train newly hired developers more efficiently since Rancher Prime reduced the learning curve associated with Kubernetes development. As a result, developers become productive and self-sufficient with less training. The user interface in Rancher Prime helps with rapid adoption and reduces new-hire training by 16 hours. This benefit is worth over \$133,100 to the composite organization.

**“SUSE is very much about solving problems. Our dedicated support engineer is not only helping us to troubleshoot Kubernetes issues, but they are like an equal partner in building our processes. They help us make the right design choices for the future. We’re finding that super helpful.”**

*Director of DevOps, technology solutions*

**Unquantified benefits.** Benefits that provide value for the composite organization but are not quantified for this study include:

- **Comprehensive design, implementation and troubleshooting assistance.** A dedicated SUSE support engineer is available for implementation support and to diagnose and resolve issues in a timely manner. With Rancher Prime, the composite organization also has access to additional support from SUSE's professional services team. The organization leverages this service during initial design and deployment stages and every time a break-fix issue needs to be resolved anywhere in its Kubernetes technology stack.
- **Reliability in air-gapped environments.** Required to communicate with satellite equipment in an air-gapped environment, the composite organization deploys K3s that is highly optimized for the Edge. The platform provides a control plane that can be separated from the data plane and can facilitate continuous software releases to satellites with minimal connectivity. Furthermore, K3s is sufficiently lightweight and can run on very low power, which are additional requirements of this environment.
- **Improved cross-team collaboration.** The composite organization enhances DevOps practices with Rancher Prime by integrating with popular CI/CD, Infrastructure as code, and configuration management tools. This eliminates silos and enables cross-team collaboration.
- **Reduced resource footprint.** Rancher Prime supports K3s distribution for edge and IoT devices with full integration with SUSE Edge, which is SUSE's cloud-native solution for managing edge. By leveraging GitOps Rancher Prime can manage thousands of devices easily with a unified user experience, saving costs in hardware and IT operations for the composite organization.
- **Avoided vendor lock-in.** The composite organization's DevOps team invests in Rancher Prime, allowing it to prevent vendor lock-in and retain the flexibility to choose and make decisions on its platform. Since Rancher Prime is platform agnostic and supports any infrastructure platform, cloud, or Kubernetes distribution that fits with the organization's needs, the investment increases operational agility and reduces the risk of hidden costs should the IT strategy change.

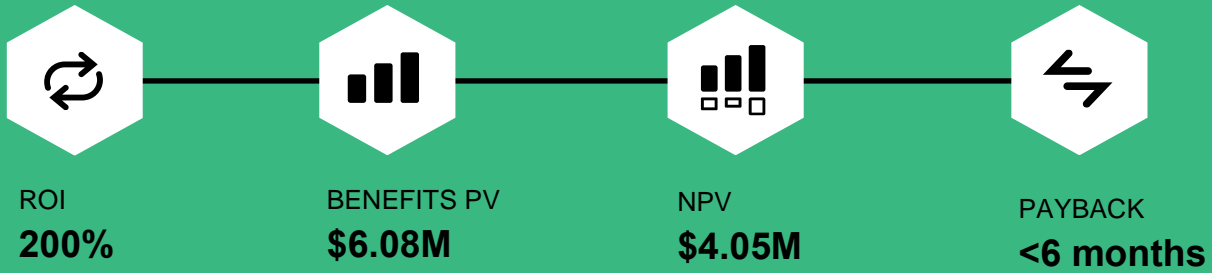
**“I love SUSE because they are not trying to charge a licensing fee for open-source software. They’re focusing on the parts of the business and value that matter, and they’re not trying to milk customers for every last dime.”**

*VP of DevSecOps, technology solutions*

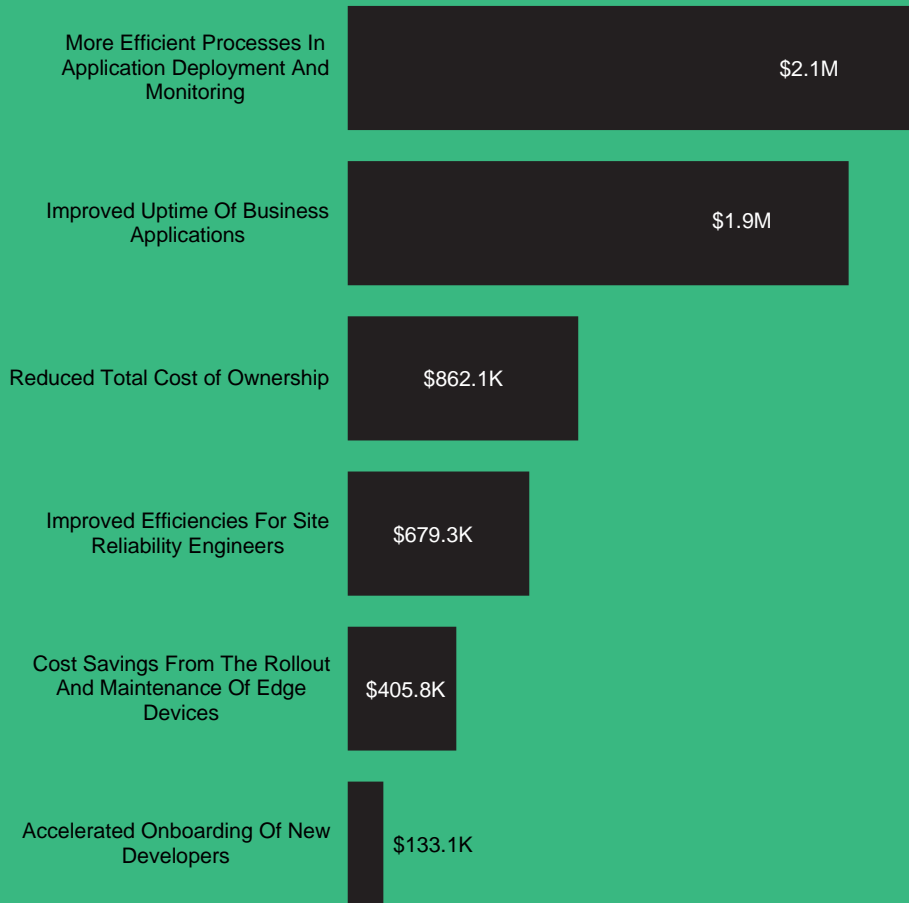
**Costs.** Three-year, risk-adjusted PV costs for the composite organization include:

- **Fees for Rancher Prime.** The composite organization pays annual subscription fees based on the number of managed nodes and deployed Rancher Management Servers. Fees are also charged for initial implementation consulting services, which combined with the annual subscription adds up to a total cost of \$1.7 million to the composite organization.
- **Internal costs.** The composite organization incurs initial implementation costs, ongoing Rancher Prime management costs as well as initial and ongoing developer training costs associated with Rancher Prime. These internal costs as well as the cost of edge devices make up the total internal costs of \$355,100 to the composite organization.

The financial analysis which is based on the interviews and survey found that a composite organization experiences benefits of \$6.1M over three years versus costs of \$2.0 million, adding up to a net present value (NPV) of \$4.1 million and an ROI of 200%.



### Benefits (Three-Year)



## TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews and survey, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in Rancher Prime.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that Rancher Prime can have on an organization.

### DISCLOSURES

Readers should be aware of the following:

This study is commissioned by SUSE and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in Rancher Prime.

SUSE reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

SUSE provided the customer names for the interviews but did not participate in the interviews.

Forrester fielded the double-blind survey using a third-party survey partner.



### DUE DILIGENCE

Interviewed Rancher Prime stakeholders and Forrester analysts to gather data relative to Rancher Prime.



### INTERVIEWS AND SURVEY

Interviewed four representatives and surveyed 25 respondents at organizations using Rancher Prime to obtain data with respect to costs, benefits, and risks.



### COMPOSITE ORGANIZATION

Designed a composite organization based on characteristics of the interviewees and survey respondents.



### FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of the interviews and survey using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewees and survey respondents.



### CASE STUDY

Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.



# The Rancher Prime Customer Journey

## ■ Drivers leading to the Rancher Prime investment

### KEY CHALLENGES

Forrester interviewed six representatives and surveyed 25 respondents with experience using Rancher Prime at their organizations. For more details on these individuals and the organizations they represent, see [Appendix B](#).

Interviewees' organizations and survey respondents adopted Kubernetes on average three to five years ago as part of their digital transformation efforts. They wanted to leverage their in-house-built application stacks across data centers, private clouds, and public cloud-based environments. Kubernetes allowed these organizations to transform their maintenance-intensive legacy applications into newly factored applications. To manage the resulting cluster sprawl across their growing Kubernetes container environments and to bring development teams into a more standardized operating model, the interviewees' organizations looked at adding a Kubernetes management platform to their technology stack.

The interviewees and survey participants noted how their organizations struggled with common challenges, including:

- Developers' reliance on platform architects for cluster setup and monitoring hindered innovation and development velocity.
- The inability to quickly detect and remediate node failures resulted in system downtime.
- Manual processes stifled platform architects during new project setup and monitoring application health and cluster performance.
- The lack of consistent user access and security policies for all Kubernetes clusters exposed cloud-native workloads to unauthorized access.
- Application developers' inability to consistently adopt Kubernetes' native auto-scaler utility created unnecessarily high computing costs.

**“The Kubernetes upgrade took us almost a month and a half to implement and took 100% of my time. With Rancher Prime, I just had to read the official documentation, and the codebase is just a simple code that we can write in a week. So, we had a ready solution that was almost capable for production environments. The difference is huge for us and that’s the main driver.”**

*Lead systems engineer, internet technology*

### INVESTMENT OBJECTIVES

Interviewees' organizations and survey respondents needed a solution that would provide better means for their DevOps teams to efficiently deploy, maintain, and scale multiple clusters across a mix of different environments.

Several interviewees and the majority of survey respondents had previous experience using Kubernetes management platforms; however, they said their organizations required a more mature offering, and they turned to SUSE with the expectation that the Rancher Prime enterprise Kubernetes management platform would enable their organizations to:

- Deploy a mature solution that helps manage the complexity of multi-cluster Kubernetes management.
- Easily shift between running applications in the cloud or on-premises and make applications portable between platforms.
- Transform legacy applications into newly factored applications with efficient testing, development,

and production release of containerized applications.

- Provide a 'single pane of glass' to manage the lifecycle of multiple clusters in a unified way.
- Centrally set up authentication and authorization, user security, and cluster hardening across a mix of environments.
- Allow for open-source monitoring and management tools to be fully integrated into the Kubernetes 'control plane' for added visibility into node performance or potential issues.

Interviewees' organizations and survey respondents were looking for a solution that enabled them to manage Kubernetes, their data centers and a multi-cloud environment in a unified way. They wanted to manage both internal and external facing applications through a single pane of glass that provided unified visibility and control.

**SELECTION PROCESS AND CONSIDERATIONS**

As part of their Proof-of-Concept (PoC) evaluations, interviewees' organizations typically engaged with two vendors. The KaaS platform architect at the technology manufacturing firm recalled: "We looked at a couple of different vendors, and we were very impressed by Rancher. We have 50 clusters which we are running in our 50 data centers all around the world. To have a management solution on top and all these tools in Rancher RKE was a key selling factor. The actual PoC when we worked together with SUSE took a couple of weeks. Their team was very motivated and engaged during the PoC, which made it easier for us to decide to go with Rancher Prime."

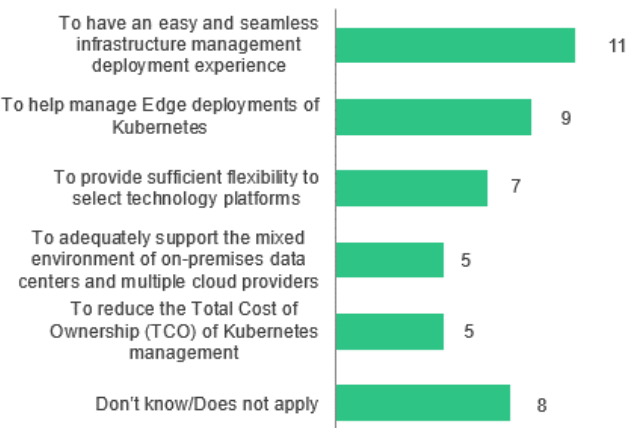
The lead systems engineer at the internet technology company recalled their experience with a previously deployed solution as an early adopter of Kubernetes: "Four years ago, we started as a pure DevOps practice using pipelines, and that was bleeding edge technology. At that point, there were not many options; there was something from [another vendor] that proved to be a terrible solution for us. But then it

was the perfect moment to make the switch to Rancher Prime and we decided to go that way."

The director of DevSecOps at the technology solutions company said: "SUSE's documentation on compliance regulation is much more accessible compared to a competitive solution I worked with. Rancher Prime is also much easier to learn and to use, with the same benefits."

Survey participants with previous experience using Kubernetes management platforms selected the following reasons for their organizations to shift from another Kubernetes management platform to Rancher Prime:

**If you have shifted to Rancher Prime from another Kubernetes management platform, why did your organization transition to Rancher Prime?**

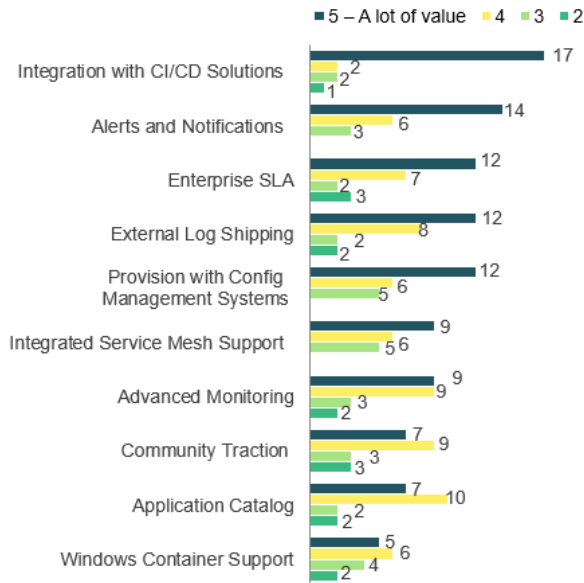


Base: 25 Rancher Prime users  
Source: A commissioned study conducted by Forrester Consulting on behalf of SUSE, April 2022

Interviewees and survey participants cited the non-prescriptive nature of Rancher Prime as a key decision factor in selecting the platform. They noted that Rancher Prime allowed them to plug in their CI/CD pipelines of choice with ease and did not require certain solutions to be used. They noted that Rancher Prime is easy to integrate into their existing tooling and this minimizes the change to existing processes and practices.

Survey participants with experience using Rancher Prime ranked the value their organizations received from shared tools and services that are available in the platform or can easily be integrated into Rancher Prime:

**“Rancher Prime encourages user adoption with easy, reliable, and consistent access to shared tools and services. On a scale of 1 to 5, please indicate the value your organization receives from the following capabilities:”**

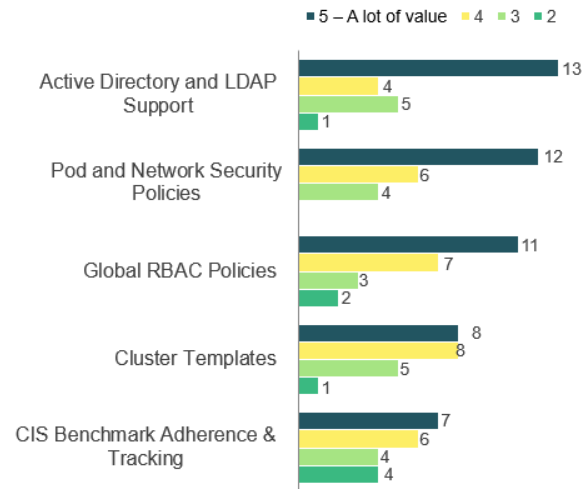


Base: 25 Rancher Prime users  
Source: A commissioned study conducted by Forrester Consulting on behalf of SUSE, April 2022

The KaaS platform architect at the technology manufacturing firm cited the requirement to centrally define security credentials as a main selection factor. They said: "We started to see the adoption of [an unmanaged container runtime solution]. Our security team said that we cannot support unmanaged development platforms, but the teams must use Kubernetes. So we had to decide whether we let everybody build their own cluster and then make sure that it ticks all the boxes in terms of security, or to build out a singular platform that we could serve out to people, where we centrally define security credentials and requirements. And we went down the path of providing Kubernetes as a service (KaaS) to developers in different areas of the business."

Survey participants with experience using Rancher Prime ranked the value their organizations received from best-practices security policy enforcement and advanced user management in Rancher Prime:

**“Rancher Prime allows for best-practice security policy enforcement and advanced user management on any infrastructure. On a scale of 1 to 5, please indicate the value your organization receives from the following capabilities in Rancher Prime:”**

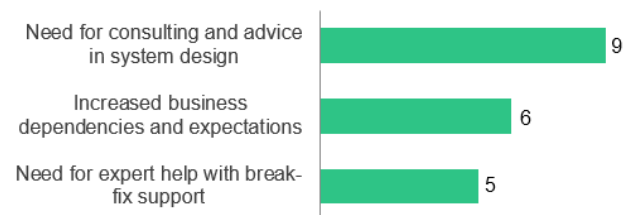


Base: 25 Rancher Prime users  
Source: A commissioned study conducted by Forrester Consulting on behalf of SUSE, April 2022

Interviewees also noted that their organizations saw value in entering a service and support contract that provided design best practices and break-fix support of the entire Kubernetes technology stack, not only for the vendor's solution.

Survey participants conveyed the following main drivers for their organizations to subscribe to a service and support contract with Rancher Prime:

**“Which of the following business drivers prompted your organization to sign up for a support contract with SUSE?”**



Note: Top 3 responses shown  
Base: 25 Rancher Prime users  
Source: A commissioned study conducted by Forrester Consulting on behalf of SUSE, April 2022

## COMPOSITE ORGANIZATION

Based on the interviews and survey, Forrester constructed a TEI framework, a composite company, and an ROI analysis that illustrates the areas financially affected. The composite organization is representative of the six interviewees and the 25 survey respondents, and it is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

**Description of composite.** The global, multibillion-dollar manufacturing organization operates 50 data centers at its 50 global manufacturing plants. A central team of platform architects and site reliability engineers oversees the infrastructure for the organization's manufacturing applications and is driving its architectural transformation. This strategy includes application modernization and creating cloud-native applications while business-critical production line applications run on-premises in local data centers and some services run on edge devices at the organization's global manufacturing facilities.

**Deployment characteristics.** The central team made containerization a central part of the composite organization's overall application architecture and deployed Rancher three and a half years ago to provide Kubernetes as a service to its global software development team.

Three hundred developers use Rancher by Year 3 of deployment. The team is reengineering thousands of services and applications or rebuilding them before migration to the cloud. Developers are converting some of the organization's client-server applications into cloud-native ones to run on edge devices on Kubernetes. The teams have already migrated several critical applications and are managing these in clusters via the Rancher platform. The objective is to complete the transformation and migration of all applications within five years. The composite organization subscribes to a multi-year Premium Support contract with SUSE.

**“Ninety percent of our containers are on premises, edge, and in the local data centers. We operate with regional multi-purpose clusters: one management cluster by region in North America, Europe, and Asia Pacific, and three for high availability. The three management clusters are responsible overall for 50 facilities where we are offering our manufacturing application services. We have ten nodes per location, so 500 nodes in total, and perhaps next year we will ramp up from ten to fifteen, that's 750 nodes when we scale up dynamically.”**

*KaaS platform architect, technology manufacturing*

### Key Assumptions

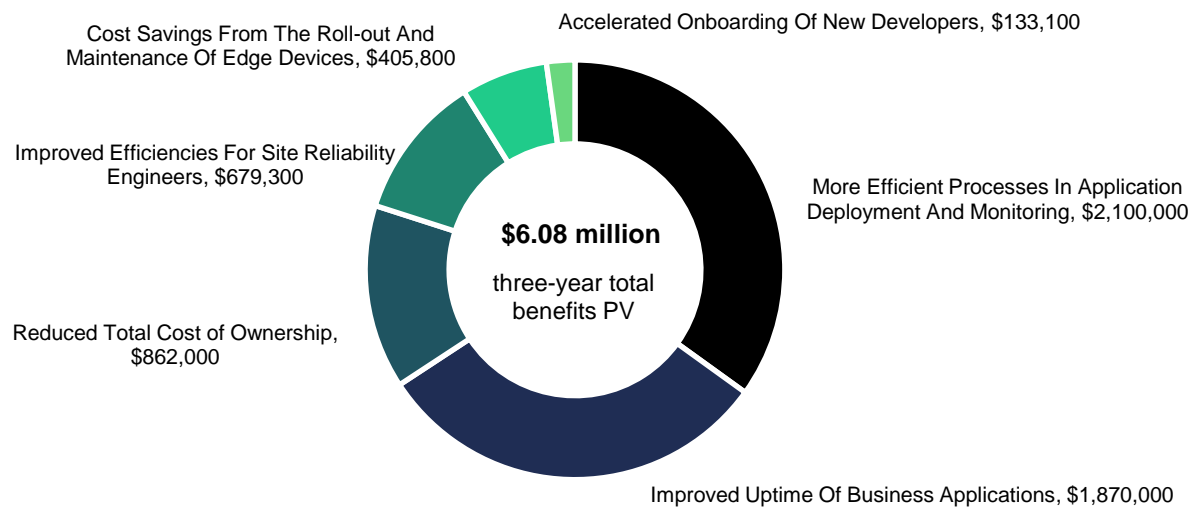
- **\$25 billion global manufacturing organization**
- **300 developers use Rancher Prime by year 3**
- **131 Rancher Prime nodes are initially deployed at 50 clusters at 50 data centers globally, growing to 589 nodes by Year 3**
- **Four Rancher Management Servers are installed in four regions**
- **Deployed K3s Lightweight Kubernetes on single-board computing devices on the edge**

# Analysis Of Benefits

■ Quantified benefit data as applied to the composite

Total Benefits						
Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	More Efficient Processes In Application Deployment And Monitoring	\$581,400	\$872,100	\$1,162,800	\$2,616,300	\$2,122,918
Btr	Improved Uptime Of Business Applications	\$513,000	\$769,500	\$1,026,000	\$2,308,500	\$1,873,163
Ctr	Reduced Total Cost of Ownership	\$170,100	\$344,250	\$562,950	\$1,077,300	\$862,093
Dtr	Improved Efficiencies For Site Reliability Engineers	\$204,687	\$277,790	\$350,892	\$833,369	\$679,288
Etr	Cost Savings From The Roll-out And Maintenance Of Edge Devices	\$207,969	\$130,794	\$144,649	\$483,411	\$405,833
Ftr	Accelerated Onboarding Of New Developers	\$36,720	\$53,856	\$73,440	\$164,016	\$133,067
	Total benefits (risk-adjusted)	\$1,713,876	\$2,448,289	\$3,320,731	\$7,482,896	\$6,076,362

## BENEFITS BY CATEGORY



This section examines six quantified benefits and provides insight into the data points and evidence collected during the customer interviews and survey, as well as the underlying models and assumptions used in the financial analysis for this use case.

## MORE EFFICIENT PROCESSES IN APPLICATION DEPLOYMENT AND MONITORING

**Evidence and data.** Interviewees and survey participants highlighted how Rancher Prime automated many basic administrative processes such as role-based access control (RBAC), namespace-as-a-service, authentication, and the application catalogue. Interviewees explained that one of the most significant benefits their organizations realized was Rancher Prime's ability to allow developers to quickly spin up Kubernetes clusters without relying on the central DevOps team to provide this service.

Interviewees' organizations saw a reduction in their developers' workloads from leveraging Rancher for automated monitoring of resources and cluster health. If there was an issue, developers were notified via the Rancher Prime user interface, and they no longer had to keep checking workload status, performance, or resource usage – Rancher Prime eliminated these manual tasks, further freeing up developers to spend more time building applications rather than configuring.

- **Robust development environment at the developers' fingertips.** The VP of DevSecOps at the technology solutions company elaborated: "Even developers who aren't infrastructure people but are developing applications that deploy into Kubernetes are able to launch K3s or Rancher Desktop [SUSE's 100% open source, desktop-based container development environment] within a day and get a K3s cluster that they are connected to. They did virtually no setup for it. It was just click, click, click, done. And now, they've got this robust development environment that they can destroy and rebuild at will. They can now do all of the complex Kubernetes management we were doing to support them, and they're doing it locally on their own machines."
- **End-to-end monitoring of microservices.** The lead systems engineer at the internet technology

**“Rancher Prime allows us to modify a pod or a configuration via a menu interface, so we don’t have to use [the data-serialization language] YAML and learn the details of [the Kubernetes command line tool] kubectl. This creates time saving during the ramp up of projects and the ramp up of new developers because of the user interface.”**

*KaaS platform architect, technology manufacturing*

firm said that the main benefit developers are seeing is when they deploy a new microservice for development, testing or production. They said: "Developers can see the complete cycle that microservice went through to get to Rancher Prime. They can see if it's deployed, how long it has been running, and how many resources it uses. With other solutions, you don't have that; developers would have to call us, and we had to give them that information. In Rancher Prime, you can create an account that's limited to only permitting them to view logs or resource usage for that particular microservice. They're not able to break anything, but they can get a lot of information about how their microservices are performing at any moment."

- **Improved development workflow.** The director of DevSecOps at the technology solutions company said: "The Rancher Desktop workflow brings a Kubernetes cluster with it out of the box. It brings a container registry with it that is automatically connected into that Kubernetes cluster. This may sound like a small thing, but for container nerds like us, that's a huge deal because it was hard or almost impossible to get a container from your local computer into a registry that the Kubernetes cluster could see and then

pull from without also building several other supporting pieces of infrastructure. And every single time your development workflow was terrible. There was no local Kubernetes deploy and debug workflow before you made a commit and pushed the image, but Rancher Desktop just unlocked that for us for free - we didn't have to do any extra work."

- **Improved software release velocity.** The KaaS platform architect in the technology manufacturing industry explained: "Our application teams save time on project ramp-up. Previously, there was a collection of five to ten different tickets they had to put together to get things done. Today, we have a 30-minute onboarding session to set up a new project. A process that involved the construction of documents, the reading, the meetings, and then the actual physical deployment is now a non-event. We've shaved a lot of time off every

project by the ability to just say, 'all right, 30 minutes, boom, you're done'. That's a big-time saver and creates a lot of velocity. There are teams that are now doing releases every couple of weeks. It's just not a big deal now."

**Modeling and assumptions.** Forrester assumes the following about the composite organization:

- Initially, the composite organization rolls out Rancher to 150 developers and adds 75 new Rancher users per year. In Year 3, a total of 300 developers have access to Rancher Prime.
- The average developer at the composite organization creates and deploys 12 microservices per year.
- With Rancher Prime, the time to create and deploy a new microservice is reduced by 8 hours on average.

**“Creating and deploying microservices without Rancher Prime would require a phone call to the central team that would have to provide the developer with the manifest files for the microservice and the pipeline they need to use. With Rancher Prime, developers save time as they don’t have to call anyone; Rancher Prime itself accepts that application without a problem and they have a pipeline.”**

— Lead system engineer, internet technology

- The average fully burdened hourly compensation of a developer in the composite organization is \$85 an hour.
- 50% of the time saved by developers is put toward additional work efforts.

**Risks.** Operational differences that may impact the financial benefit associated with efficiencies gained during the software development process include:

- The prior state and maturity level of the organization's Kubernetes development operations, including its developers' experience, capabilities, and processes for creating and deploying microservices.
- The number of developers with access to Rancher.
- The number of microservices that developers create and deploy per year.
- The extent to which the organization can effectively leverage Rancher Prime capabilities and mature its overall development operations.

**“Developers are more productive when they know how the application performs and they can see a lot more information about the microservice than they could with our previous management platform.”**

*Lead systems engineer, internet technology*

- Prevailing local compensation rates for software developers.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$2.1 million.

### More Efficient Processes In Application Deployment And Monitoring

Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	Number of application developers using Rancher Prime	Composite	150	225	300
A2	Average number of microservices a developer produces per year	Composite	12	12	12
A3	Number of hours saved with Rancher Prime per microservice	Composite	8	8	8
A4	Total number of hours saved by application developers (annually)	A1*A2*A3	14,400	21,600	28,800
A5	Average fully loaded hourly cost of a developer	Composite	\$85	\$85	\$85
A6	FTE costs saved on application deployment and monitoring with Rancher Prime (annually)	A4*A5	\$1,224,000	\$1,836,000	\$2,448,000
A7	Productivity realization factor	TEI standard	50%	50%	50%
At	More efficient processes in application deployment and monitoring	A6*A7	\$612,000	\$918,000	\$1,224,000
	Risk adjustment	↓5%			
Atr	More efficient processes in application deployment and monitoring (risk-adjusted)		\$581,400	\$872,100	\$1,162,800
<b>Three-year total: \$2,616,300</b>			<b>Three-year present value: \$2,122,918</b>		



**IMPROVED UPTIME OF BUSINESS APPLICATIONS**

**Evidence and data.** Several capabilities of the Rancher Prime platform reduced the number of application outages for the interviewees' organizations.

- **Automated roll-back and recovery of failed nodes.** The lead systems engineer at the internet technology firm said: "Rancher Prime is tracking every change, so when something fails inside the cluster Rancher Prime would notify us with an alert and automatically do most of the recovery. If one node fails Rancher Prime would notify us that it started to provision new nodes that would separate healthy ones. Rancher Prime would evaluate all of the workload that was currently assigned to the failing node. So, that's a huge win for us."
- **Support of multi-master deployments.** The same interviewee said: "I believe Rancher Prime is the only orchestrator platform that supports multi-master deployments. It creates duplicates of our environment across different data centers. If one data center fails, our customers can continue using the duplicate environment until the other one comes back to life. This has an impact on uptime. If people can't use our application, they are not buying our products, and we lose money."

**“If developers make a mistake, they can go to Rancher Prime, and they can roll back and un-deploy that application without creating downtime.”**

*Lead systems engineer, internet technology*

**Modeling and assumptions.** Forrester assumes the following about the composite organization:

- The average cost of an outage to the organization is \$270,000 per outage.
- The composite organization prevents two outages with Rancher Prime in Year 1, three in Year 2 and four in Year 3. The number of prevented outages increases with the growing adoption of Rancher Prime.

**Risks.** Operational differences that may impact the financial benefit associated with improved uptime of business applications include:

- The average cost of an outage and the extent to which the organization can effectively leverage Rancher Prime's capabilities to prevent application outages and downtime.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV of \$1.87 million.

**Improved Uptime Of Business Applications**

Ref.	Metric	Source	Year 1	Year 2	Year 3
B1	Average cost of a software outage to the business	Composite	\$270,000	\$270,000	\$270,000
B2	Number of outages prevented with improved uptime of business applications	Composite	2	3	4
Bt	Improved uptime of business applications	B1*B2	\$540,000	\$810,000	\$1,080,000
	Risk adjustment	↓5%			
Btr	Improved uptime of business applications (risk-adjusted)		\$513,000	\$769,500	\$1,026,000

**Three-year total: \$2,308,500**

**Three-year present value: \$1,873,163**

## REDUCED TOTAL COST OF OWNERSHIP

**Evidence and data.** Before adopting Rancher Prime as their Kubernetes management platform, the interviewees' organizations incurred costs they could eliminate with the investment of Rancher Prime.

**Reduced need for developer tool licenses and cloud services.** By reducing the reliance on other solutions that were redundant with capabilities Rancher Prime provided and by better utilizing existing data center hardware, one interviewee said they could save on software licenses, subscription fees and client computing costs:

- The VP of DevSecOps at the technology solutions company explained: "An example is when someone wanted to run a [numeric computing environment] and do some experiments, but when they finished, they forgot to tear it down. So we were paying the license for the [numeric computing environment] and had those [scalable computing capacity] instances running that did nothing. So now, if someone wants a [numeric computing environment] server they go to the Rancher Prime control interface and get a VM to get access to it instead of going to [the scalable computing capacity] and spinning up an instance out of band that's not part of infrastructure as code somewhere that is not under management – and then we forget about it and I might find it next month when I do a security audit on managed resources. So, if we manage to collapse everything into two clusters, we can reduce our infrastructure costs by 30 to 40 percent easily without trying."
- The same interviewee said: "We had three new hires start last week and we literally just tell them if you have [the virtualization software] installed, remove that, drop Rancher Desktop in, fire it up, make sure it works and call me back. And we haven't had a problem yet. And we're not paying a license fee per user, like [with the virtualization software vendor] that started charging us \$21 per

**"It's a struggle cleaning up after yourself. How many organizations are wasting thousands or millions of dollars in their cloud compute environment with sandbox experimental skunkworks projects that someone was playing around with and forgot to tear down because they got a little busy with something else."**

*VP of DevSecOps, technology solutions*

user per month, and that for open-source software. So that was the move that pushed me to forcefully remove it from all computers in the company and replace it with Rancher Desktop."

**Cost savings from improved adoption of auto-scaling.** While auto-scaling can automatically increase and reduce computing power with the change in demand of the workloads, developers at the interviewees' organizations found it complicated to implement the right policies that would balance the load of their applications – they avoided using this capability in Kubernetes. Instead, they added extra computing capacity to their applications and services, increasing ongoing web server infrastructure and storage costs. The KaaS platform architect at the technology manufacturing firm explained how Rancher Prime made it easy for developers to leverage Kubernetes' native auto-scaler utility to reduce ongoing computing costs.

- They said: "Auto scaling is a feature we've been really wanting to leverage. Developers are capping how many nodes are running, they contain the scaling and control their cost, they're capping their expenses. Previously, they would create the rules and code this in YAML or they would submit a ticket to get their DNS entry and have these rules built by the DevOps team. With Rancher Prime, they can do it easily on their own."

**Modeling and assumptions.** Forrester assumes the following about the composite organization:

**Cost savings from reduced need for developer tool licenses and CSP services.** This includes:

- Previously incurred license costs for virtualization software, subscription to a numeric computing environment, and fees for additional scalable computing capacity that added up to \$50 on average per developer per month are eliminated with the rollout of Rancher Prime.
- With 150 developers in Year 1, this monthly cost of \$50 adds up to \$90,000 over 12 months, growing to \$135,000 with 225 developers in Year 2 and \$180,000 with 300 developers in Year 3.

**Cost savings from auto-scaling.** This includes:

- Rancher Prime makes it easy for developers to implement auto-scaling, which directly impacts the composite organization's usage of computing resources. Applications consume less computing power, adding up to an average annual saving of \$5,500 per application attributable to Rancher Prime.
- In Year 1, developers roll out 18 new applications that leverage auto-scaling. In Year 2, they deploy an additional 27 applications and 38 additional applications in Year 3, increasing the number of

**“With Rancher Prime, developers can create their own auto scaling. They create their ingress, their own policies, their own services, and they allocate their own storage. DevOps doesn’t get involved anymore and there is never a discussion of storage.”**

*KaaS platform architect, technology manufacturing*

applications with auto-scaling capabilities to 81 for the composite organization.

**Risks.** Operational differences that may impact the financial benefit associated with a reduced total cost of ownership include:

- The previous costs associated with the virtualization and other tools developers use and their level of consumption of CSP services.
- The extent to which developers can effectively leverage Rancher Prime's capabilities for auto-scaling.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of over \$862,000.

**Reduced Total Cost Of Ownership**

Ref.	Metric	Source	Year 1	Year 2	Year 3
C1	Reduced need for developer tool licenses and CSP services	Interviews	\$90,000	\$135,000	\$180,000
C2	IT infrastructure cost savings from using auto-scaling	Interviews	\$99,000	\$247,500	\$445,500
Ct	Reduced total cost of ownership	C1+C2	\$189,000	\$382,500	\$625,500
	Risk adjustment	↓10%			
Ctr	Reduced total cost of ownership (risk-adjusted)		\$170,100	\$344,250	\$562,950

**Three-year total: \$1,077,300**

**Three-year present value: \$862,093**

## IMPROVED EFFICIENCIES FOR SITE RELIABILITY ENGINEERS

**Evidence and data.** Interviewee's organizations and survey respondents acknowledged the measurable impact Rancher Prime has on the workload of back-end developers or Site Reliability Engineers (SREs). Administrative tasks like patching upgrades, deploying new microservices, providing logs and other resources to developers, and spinning up new clusters were among the functions they could either automate or allow developers to perform via the user interface (UI) in Rancher Prime. Additionally, they could offload the burden of monitoring application health and cluster performance to developers.

The same UI made it easier for SREs to manage workload throughout the organizations' Kubernetes landscapes. The lead systems engineer at the internet technology firm explained: "Knowledge transfer to new engineers is much easier and takes much less of my time. There are good tutorials on how to use Rancher Prime, and it has a simple UI with buttons and fancy features you can use. Previously, there was no UI – it was a really huge code base that was managing all the workload we have in that cluster."

- **Efficiencies during Kubernetes upgrades.** The KaaS platform architect at the technology manufacturing firm credited Rancher Prime for providing additional governance that gives the SRE team visibility into clusters performance and simplifying the process of implementing, deploying, and upgrading the Kubernetes environment. They said: "We upgraded two production clusters, Europe, and North America, and we did both Rancher Prime and Kubernetes upgrades in about four hours – and a lot of it was just us sitting there staring at the screen watching Rancher Prime work. And some of it is as simple as going in and changing the release number, and then it goes out and upgrades the platform for you."

**“The work effort for platform architects is greatly reduced since SUSE builds the configuration and upgrades both the Kubernetes and the Rancher Prime platform for them. These prepackaged updates really demystify the process a lot. When we deploy Rancher Prime and Kubernetes upgrades, we just change the release number and then Rancher Prime does the rolling upgrade for us.”**

*KaaS platform architect, technology manufacturing*

- The lead systems engineer at the internet technology firm explained that for the first upgrade they deployed with Rancher Prime, they had to discover how to integrate it entirely with their environment and configure security groups in Rancher Prime. After that, upgrades were seamless. They said: "Rancher Prime itself is doing upgrades for you. You just click one button on the UI, and the upgrade is there. It doesn't require my time or anyone else's time. You just buy a subscription that provides you with those features and you're ready to go."

The same interviewee explained further: "There are about six to ten Rancher Prime upgrades per year. SUSE would send you those updates, and you're done. I'm not doing that anymore. That is a huge win for us. I can dedicate most of my time to the other parts of the system that require my support."

- **Efficiencies when fixing failed nodes.** The lead systems engineer at the internet technology firm said: "Nodes can fail when there is an outage of the power system or an outage of the edge router that's connected to our cluster, and we lose connectivity. If the node itself is corrupted or the file system is corrupted, or there are some

security issues it would take us up to 48 hours to completely fix the environment. Previously, we had to go in and replace the failed node manually and with Rancher Prime you don't have to do that."

- **Efficiencies during cluster setup and support.**

The VP of DevSecOps at the technology solutions company said: "Rancher Prime made it so simple and straightforward to bootstrap either a basic cluster or something that's going to be high availability to run production applications for a company. We spend far less time supporting developers now, and we're not fighting things like 'My container on localhost won't deploy'. Now we're solving the problems we should be solving instead of silly day one, day two problems."

- The KaaS platform architect at the technology manufacturing firm said: "Old school thinks I would have to get a DNS entry and build these rules, but with the Rancher Prime interface, developers just build the rules, and they can design their own system. I don't get involved in any of this. "

- The lead systems engineer at the internet technology firm said: "For spinning up a new cluster when developers want to try something that's completely new or they want to change the current project, we can now give them an isolated sandbox to work in. Previously, when developers wanted to see logs for a particular microservice that was just deployed, they would have to call us, and we would have to shift those logs back to them. With Rancher Prime, we don't have to do that. We can give them limited credentials or just view-only access where they can go to that specific column and view the log."

The same lead systems engineer added:

"Previously, we were all focused on the cluster. Now we have more time to focus on the application itself. Now, we can sit down and work on security and how to make an application more resilient to attacks. We have time to discuss how we can isolate some of the services better, how to best scale them out, and what capacity they need. With 500 microservices, we have to be able to scale them properly or else they will fail."

**“We are saving time and money by not having to spend a week every time we spin up a new experimental development environment. We’re now at that self-service kiosk that people have been envisioning with virtual clusters within K3s. I don’t think we would be able to do this without Rancher Prime.”**

— Director of DevSecOps, technology solutions

**Modeling and assumptions.** Forrester assumes the following about the composite organization:

- The average fully burdened hourly compensation of an SRE in the composite organization is \$95 an hour.
- 90% of the time saved by SREs is put toward additional work efforts.

**Efficiencies during Kubernetes upgrades.**

- With Rancher Prime, the composite organization reduces the time it takes to implement Kubernetes upgrades and the associated collection of components by 80 hours.
- The composite organization applies Kubernetes upgrades and patches six times per year.

**Efficiencies when fixing failed nodes.**

- With Rancher Prime, the composite organization eliminates, on average, five outages from failed nodes per year.
- It takes, on average, 48 hours of SRE time to fully remediate an outage caused by a failed node.

**Efficiencies during the setup and support of clusters.**

- Due to the improved self-sufficiency of developers using Rancher Prime, SREs save 60 minutes per developer per month on cluster setup and support-related work.
- One hundred fifty developers use Rancher Prime in Year 1, 225 developers use Rancher Prime in Year 2, and 300 developers use Rancher Prime in Year 3.

**Risks.** Operational differences that may impact the financial benefit associated with improved efficiencies for SREs include:

- The extent to which the organization can effectively leverage Rancher Prime capabilities and mature and automate its overall DevOps processes.
- Prevailing local compensation rates for platform architects and SREs.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV of close to \$679,300.

Improved Efficiencies For Site Reliability Engineers					
Ref.	Metric	Source	Year 1	Year 2	Year 3
D1	Efficiencies during Kubernetes upgrades	Interviews	\$45,600	\$45,600	\$45,600
D2	Efficiencies when fixing failed nodes	Interviews	\$22,800	\$22,800	\$22,800
D3	Efficiencies during the setup and support of clusters	Interviews	\$171,000	\$256,500	\$342,000
D4	Productivity realization factor	TEI standard	90%	90%	90%
Dt	Improved efficiencies for site reliability engineers	(D1+D2+D3)*D4	\$215,460	\$292,410	\$369,360
	Risk adjustment	↓5%			
Dtr	Improved efficiencies for site reliability engineers (risk-adjusted)		\$204,687	\$277,790	\$350,892
<b>Three-year total: \$833,369</b>			<b>Three-year present value: \$679,288</b>		

## COST SAVINGS FROM THE ROLLOUT AND MAINTENANCE OF EDGE DEVICES

**Evidence and data.** Interviewees shared several IoT use cases that Rancher Prime enabled and the associated improvements in IT processes, productivity, costs, and technical reach.

- **Automated deployment and update of edge devices.** The manager of connectivity and internet at the automotive manufacturing company explained: "We wanted to have one orchestration layer to manage all our clusters in the cloud, to run our clusters in the data center, and we determined it would be a big benefit to have the edge devices in the same management cluster; we could use the same software to deploy the application in the same way across environments. And here we are, we made it: the 'quality attendance management' use case - people clock in, and they are checked whether they are allowed to run this equipment – with all this running on containerized [single-board computing devices]. This is such a big benefit because we have 150 devices running the same application on low code, not programmed – that's it."

The head of manufacturing applications at the automotive company added: "There are a lot of sensors and actuators in our manufacturing facilities. The clock-in system is also a sensor because it's a touchscreen. The device is much cheaper and easier to maintain than a multi-purpose environment or personal computer. It is a specific device for a specific purpose with a specific application that we can deploy automatically with Rancher Prime."

- **Unified management interface across multiple infrastructures.** The KaaS platform architect at the technology manufacturing firm shared the following edge use case: "As a small central DevOps team, we cannot be in 50 plants simultaneously. So, people in the plants have to

**“Edge devices can be easily deployed, updated, and maintained with Rancher Prime. Software deployment and set-up is tremendously low compared to the classical approach we used before. So, that’s a tremendous benefit and that was also a driving factor in selecting Rancher Prime.”**

*Head of manufacturing applications,  
automotive manufacturing*

be responsible for the IoT devices locally, but they cannot manage both the Kubernetes platform and another platform for IoT devices via two separate management interfaces. With Rancher Prime we can do everything with the same service everywhere approach - continuous deployment instead of monthly updates."

The same interviewee added: "One option was to continue using personal computers, which meant deploying software onto a Windows computer. Applying updates was a lot of effort, and one would not know if the update was working at all. The other option was to go to one of the cloud providers and buy their IoT edge service. The drawback is that you will not only get their edge device management platform, but you also need to consume that vendor's cloud services because they say that the IoT devices work only perfectly with their cloud services. These would be the two extremes, but we wanted to have control over these devices, and we wanted to be able to decide what kind of services we connect. At the same time, we didn't want to upgrade and maintain the system in the old-school PC way. With the Rancher Prime arrangement, we now realize this big benefit for the people operating the platform."

- The VP of DevSecOps at the technology solutions company noted their experience with K3s: "Those types of hard problems where you're talking about shared hardware control and deadlocks on a satellite that you can't just reboot, SUSE figured that out. Every solution that we would have come to would have been some version of us reinventing K3s. That's the only way we would have been able to get Kubernetes small enough and stable enough and deployable enough to work for our satellite project."

**Modeling and assumptions.** Forrester assumes the following about the composite organization.

- The composite organization deploys 150 clock-in devices globally in Year 1, growing the number of devices by 10% year-over-year.
- Without Rancher Prime, applying patches and updates to clock-in devices would take one hour per device 17 times per year or every three weeks.
- Rancher reduces this time by 90%.

- In the first year, 75% of clock-in devices are in production. By the end of Year 1, all 150 devices will be rolled out.
- The average fully burdened hourly compensation of a desktop support engineer in the composite organization is \$55 an hour.
- By deploying edge devices that are cost-effective single-board computers, the composite organization avoids the purchase of personal computers for use as clock-in devices and saves an average of \$1,000 per PC.

**Risks.** The financial benefit associated with edge use cases will vary based on the applicability of edge use cases and the adoption of Edge architectures and prevailing local compensation rates for desktop support engineers.

- Results.** To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of over \$405,800.

### Cost Savings From The Rollout And Maintenance Of Edge Devices

Ref.	Metric	Source	Year 1	Year 2	Year 3
E1	Number of clock-in devices	Interviews	150	165	182
E2	Hours required to keep devices updated and patched without Rancher Prime	Interviews	2,550	2,805	3,094
E3	Hours saved upgrading and patching devices with Rancher Prime	E2*0.9	2,295	2,525	2,785
E4	Rollout completion rate of edge devices for attendance management	Interviews	75%	100%	100%
E5	Average fully loaded hourly cost of a local desktop support engineer	TEI standard	\$55	\$55	\$55
E6	Costs saved from upgrading and patching devices (annually)	E3*E4*E5	\$94,669	\$138,875	\$153,175
E7	Cost savings from not having to purchase desktop computers	Interviews	\$150,000	\$15,000	\$17,000
Et	Cost savings from the rollout and maintenance of edge devices	E4+E5	\$244,669	\$153,875	\$170,175
	Risk adjustment	↓15%			
Etr	Cost savings from the rollout and maintenance of edge devices (risk-adjusted)		\$207,969	\$130,794	\$144,649
<b>Three-year total: \$483,411</b>			<b>Three-year present value: \$405,833</b>		



## ACCELERATED ONBOARDING OF NEW DEVELOPERS

**Evidence and data.** Interviewees and survey respondents confirmed that their organizations could hire more junior developers and train newly hired developers more efficiently since Rancher Prime reduced the learning curve associated with Kubernetes development. As a result, developers became productive and self-sufficient with less training.

- The KaaS platform architect at the technology manufacturing firm said: "The user interface in Rancher Prime helps with rapid adoption. New hires don't have to get through kubectrl learning, and when they see our cookbook-style onboarding document, it doesn't take long before they're all over it. The shorter learning curve helps the developer move forward more quickly".

The same interviewee added: "Rancher Prime offers the ability to go in through a menu interface, to click into a deployment, and to modify a pod or a configuration. For a new hire, coming into the config page and letting Rancher generate your YAML is a good way to onboard and become productive right away."

**Modeling and assumptions.** Forrester assumes the following about the composite organization:

**“We can now hire much less experienced people because SUSE has all the documentation, and you have great community around it. You have licenses that provide you with support, so you spend much less with a new hire, and they are ready to go much faster.”**

*Lead systems engineer, internet technology*

- At a 20% turnover rate in development, the composite organization hires and trains 30 new Rancher Prime users in Year 1, 44 in Year 2, and 60 new developers in Year 3.
- The average fully burdened hourly compensation of a developer is \$85 an hour.
- Rancher Prime reduces new-hire training by 16 hours per developer.

**Risks.** The ability to realize cost savings from faster onboarding will vary based on the new hires' ability to adopt Rancher Prime's UI and automation capabilities.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of nearly \$133,100.

### Accelerated Onboarding Of New Developers

Ref.	Metric	Source	Year 1	Year 2	Year 3
F1	Number of developer new hires	Composite	30	44	60
F2	Average fully loaded hourly cost of a developer	Composite	\$85	\$85	\$85
F3	New hire training hours saved through simplified processes	Interviews	16	16	16
Ft	Accelerated onboarding of new developers	F1*F2*F3	\$40,800	\$59,840	\$81,600
	Risk adjustment	↓10%			
Ftr	Accelerated Onboarding of new developers (risk-adjusted)		\$36,720	\$53,856	\$73,440
<b>Three-year total: \$164,016</b>			<b>Three-year present value: \$133,067</b>		

## UNQUANTIFIED BENEFITS

Interviewees mentioned the following additional benefits that their organizations experienced but were not able to quantify:

- Comprehensive design, implementation and troubleshooting assistance.** A dedicated SUSE support engineer is available for implementation support and to diagnose and resolve issues in a timely manner. With Rancher Prime, the interviewees' organizations also had access to additional support from SUSE's professional services team. The organizations leveraged this service during the initial design and deployment stages and every time a break-fix issue needed to be resolved anywhere in its Kubernetes technology stack. The director of DevOps at the technology solutions firm said: "SUSE is very much about solving problems. Our dedicated support engineer is not only helping us troubleshoot Kubernetes issues, but they are also like an equal partner in building our process. They also help us make the right design choices for the future. We're finding that super helpful."
  - Reliability in air-gapped environments.** The director of DevSecOps at the technology solutions company explained the requirement to communicate with satellite equipment in an air-gapped environment and how K3s, a Cloud Native Computing Foundation (CNCF) owned Kubernetes distribution originally developed by SUSE that is highly optimized for the edge, enables this communication. Explaining the technical challenges Rancher Prime helped to overcome. The interviewee said: "The main driver was the constraints that we have very long delay times. We need a control plane that can be separated from the data plane, and we need to be able to update things on flight and on station. We can do continuous software releases to a satellite that we may have a connection to 4 minutes at a time every hour or so. And it also must be incredibly lightweight and run on
- incredibly low power because satellites don't have a lot of power. So we came down to K3s which is a single binary and takes up just a fraction of CPU. It was the perfect control plane for us to manage applications. To ship images back and forth, we added a container runtime supported by Rancher Prime."
- Improved cross-team collaboration.** Rancher Prime allowed the organizations to enhance DevOps practices by integrating with popular CI/CD, Infrastructure as code, and configuration management tools. This eliminated silos and enabled cross-team collaboration. The KaaS architect at the technology manufacturing firm said: "We have a collection of tools – it's Kubernetes in the core and Rancher Prime that helps us accelerate adoption and collaboration. SUSE is giving us the interface and the support, and they pointed us to [other ecosystem tools] as part of their consultative approach."
  - Reduction in resource footprint.** Rancher Prime supports K3s distribution for edge and IoT devices with full integration with SUSE Edge, which is SUSE's cloud-native solution for managing edge. By leveraging GitOps, Rancher Prime provided organizations with the ability to manage thousands of devices easily with a unified user experience. This resulted in the ability to save costs in hardware and IT operations. For example, the head of manufacturing applications at the automotive manufacturing firm noted that one of the driving factors in selecting Rancher Prime was its ability to significantly reduce the effort of deploying new software versions. They said: "We have hundreds of devices where business logic is running and an executable has to be installed – we call it sneaker distribution. The one-button click deployment of the newest version to 50 locations makes the big difference in the business case."

- **Avoided vendor lock-in.** DevOps teams invested in Rancher Prime as it allowed their organizations to prevent vendor lock-in and retain the flexibility to choose and make decisions on the platform they used. Since Rancher Prime is platform agnostic and supports any infrastructure platform, cloud, or Kubernetes distribution that fits with organizations' needs, the investment increased operational agility. In addition, it reduced the risk of hidden costs that would result from changes in the organization's IT strategies.

## FLEXIBILITY

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement Rancher Prime and later realize additional uses and business opportunities, including:

- **Suitability in high-sensitivity environments where Edge computing replaces operational technology (OT).** The VP of DevSecOps at the technology solutions company said their organization plans to use RKE in an accelerated fashion in higher sensitivity and security environments. They said: "The cloud native community assumes that parts of the cluster will be able to reach out to the internet to download a new app container. Those assumptions are applying less and less, especially for government applications that are completely offline. They may have their own network, but it's not the internet. This is a use case that we see with banks, cruise lines, emergency services, and manufacturing facilities. We're discovering many places to put Edge devices where it's replacing OT, which is huge. Sometimes, they lose connectivity back home. These are problems that have been lingering there and have now been pushed to the front, and SUSE definitely seems to be the most in front of it."
- **SUSE as a partner in security certification and assurance.** The VP of DevSecOps at the technology solutions company mentioned their

organization's work assignment on a secure communications domain within a large DARPA project that included a far-edge Kubernetes implementation in an air-gapped environment prompted their team to collaborate with SUSE, which already had a team (Rancher Government Solutions working with the DARPA initiative). The organization determined that RKE2 was the most suitable environment for government projects demanding higher sensitivity and security. The interviewee said: "We go into these environments, and we drop RKE onto a system or within our development workflow. SUSE puts a lot of work and attention into compliance.

Another interviewee commented on the ease of applying Rancher Prime updates and their satisfaction with the SUSE team regularly providing relevant capabilities for security compliance. The lead systems engineer with the internet technology firm said: "There are about six to ten major Rancher Prime updates per year that include new security capabilities. The SUSE team creates and delivers these new versions – they just send us those updates, and we're done. I don't have to do that myself anymore, and that is a huge win for us as I can dedicate most of my time to the other parts of the system that require my support."

In addition to the support, advice, and services their organizations receive from SUSE, the interviewed decision makers expressed interest in continuing to partner with SUSE to leverage future services that will provide even stronger security-based assurances, security certifications and new ways to run code – delivered directly from Rancher Prime's managed secure registry – allowing them to fulfill and simplify complex security and compliance requirements.

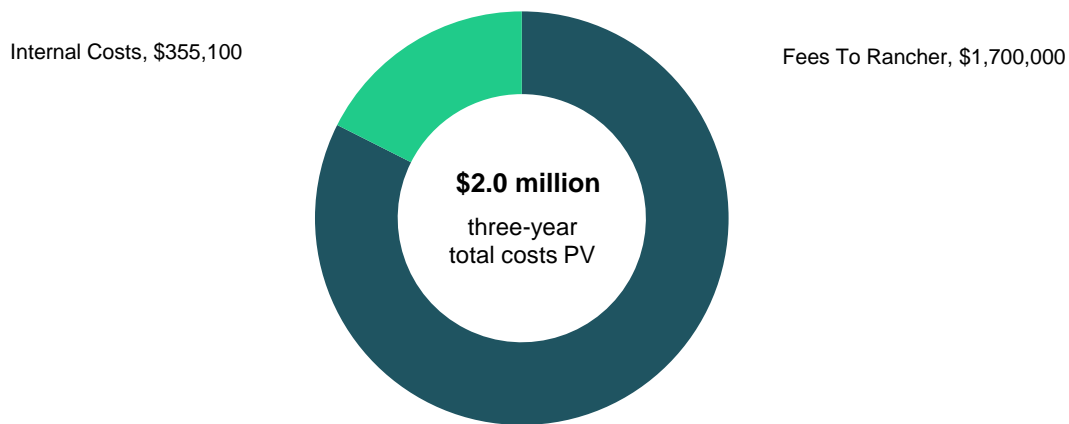
Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in [Appendix A](#)).

# Analysis Of Costs

■ Quantified cost data as applied to the composite

Total Costs							
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Gtr	Fees To Rancher	\$50,400	\$426,038	\$628,688	\$944,738	\$2,049,863	\$1,667,079
Htr	Internal Costs	\$128,920	\$63,800	\$100,672	\$113,080	\$406,472	\$355,079
	Total costs (risk-adjusted)	\$179,320	\$489,838	\$729,360	\$1,057,818	\$2,456,335	\$2,022,158

## COSTS BY CATEGORY



This section examines the costs incurred from subscription fees and setting up, customizing, and managing the Rancher Prime Enterprise Kubernetes Management Platform.

## FEES FOR RANCHER PRIME

**Evidence and data.** Fees for Rancher Prime include annual product subscription fees, initial consulting, and ongoing support services. Interviewees found Rancher Prime's per-node subscription model easy to understand and suitable for their Kubernetes growth strategies. It allowed their organizations to develop new applications as standalone cloud-native microservices that run in their clusters, in a choice of environments and any cloud.

- **Product subscriptions.** Interviewees reported that Rancher Prime's subscription fees were based on the number of Rancher Management Servers and the number of supported Kubernetes nodes in their environments, independent of how many clusters were deployed throughout their organizations. To interviewees and survey respondents, Rancher Prime's support for multi-cluster, multi-cloud and hybrid deployments, coupled with the simplicity of Rancher Prime's pricing model, was critical as they said it freed them from having to worry about on-prem versus cloud deployment. Additionally, it allowed their organizations to have as many clusters as needed and scale their infrastructure without incurring additional or unexpected costs.
- **Implementation consulting services.** Interviewees' organizations leveraged SUSE's initial implementation consulting services and noted that they gained valuable best practices architecture insights during this engagement.

In one particular use case, the initial services included the setup of high-availability and failover processes. The director of DevSecOps at the technology solutions company said: "The idea and the design behind the high availability was SUSE's expert team. They designed the failover process between Kubernetes control planes – that was especially complicated because they shared hardware since there was only one camera and one radio set. If the control plane

**“SUSE’s professional services are really sharp and very helpful. They’re solving problems with us. That’s what made them so valuable to us. And they are not pushing a hundred SUSE products at us; they are very much about solving problems.”**

*VP of DevSecOps, technology solutions*

failed, the other one had to take over, and it had to take over the hardware from the other control plane. So, SUSE had to figure out the solution, and they did, and it was awesome."

- **Premium support services.** Support services were delivered by SUSE's services team and offered white glove benefits like access to dedicated engineers who know their clients' teams and business objectives. Most interviewees purchased SUSE's Premium Support Services and started with the highest tier offering in the first year, then reduced it over time as their teams became more confident with the product.

The VP of DevSecOps at the technology solutions company said about their experience with SUSE's support team: "One thing that drives me to continue to use K3s and SUSE's RKE2 as my preferred distros is the engagement with its world-class support team. The team is a huge pleasure to work with and is insatiably brilliant. When you see the insight from the folks building and maintaining these products, and you're starting to get a bit of an idea of the roadmap and design decisions, it's just that much more reassuring. And there's always someone I can reach to ask clusters of questions."

### Conceptual Sizing Of The Environment

Metric	Sizing parameters	Year	Year 2	Year 3	Total
Number of <b>developers</b> using Rancher Prime	Composite organization	150	225	300	<b>300</b>
Number of new <b>microservices</b>	12 microservices per developer p.a.	1,800	2,700	3,600	<b>8,100</b>
Number of new <b>applications</b>	100 microservices per application	18	27	36	<b>81</b>
Number of new <b>Pods</b>	8 running pods per microservice	14,400	21,600	28,800	<b>64,800</b>
Number of new Rancher <b>nodes</b>	110 pods per node	131	196	262	<b>589</b>

**Modeling and assumptions.** Forrester assumes the following about the composite organization:

- The number of Rancher Prime-managed nodes is proportionate to the number of developers and applications shown in the conceptual sizing table above. The annual cost per node is \$1,250.
- The composite organization pays annual subscription fees for four Rancher Prime Management Servers: \$50,000 for the initial management server and \$25,000 for each additional management server in their global operation.
- The composite subscribes to an initial implementation consulting services package of 160 hours priced at \$48,000.

- In the first year of deployment, the composite subscribes to Rancher Prime and its gold-level premium support offering at the cost of \$117,000, the silver-level offering at \$65,000 in Year 2, and the bronze-level offering in Year 3 at \$38,500.

**Risks.** The expected financial impact is subject to risks and variation based on several factors, including the organization's existing infrastructure, use cases and the level of maturity in Kubernetes management and orchestration.

**Results.** To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of close to \$1.7 million.

### Fees For Rancher Prime

Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
G1	Total number of Rancher Prime-managed Nodes	Composite		131	327	589
G2	Rancher Nodes subscription fees	G1*\$1,250		\$163,750	\$408,750	\$736,250
G3	Rancher Management Server subscription fees	Composite		\$125,000	\$125,000	\$125,000
G4	Rancher implementation consulting services	Composite	\$48,000			
G5	Rancher Prime Premium Support	Composite		\$117,000	\$65,000	\$38,500
Gt	Fees For Rancher Prime	G2+G3+G4+G5	\$48,000	\$405,750	\$598,750	\$899,750
	Risk adjustment	↑5%				
Gtr	Fees For Rancher (risk-adjusted)		\$50,400	\$426,038	\$628,688	\$944,738
<b>Three-year total: \$2,049,863</b>			<b>Three-year present value: \$1,667,076</b>			

### INTERNAL COSTS

**Evidence and data.** The interviewees confirmed that the initial implementation and the ongoing upkeep and customization of their Rancher Prime implementation required some dedicated time investment from their platform architects and SREs. Since Rancher Prime was easy to use, well documented and stable, engineers and developers who had access to the platform received minimal formal training from SUSE.

Organizations had to invest in edge devices to leverage specific edge use cases and incurred hardware costs.

**Modeling and assumptions.** Forrester assumes the following about the composite organization:

- Initial implementation of Rancher Prime requires the investment of 160 hours by the organization's platform architects. This includes a two-week proof of concept deployment. SREs spend, on average, 80 hours per year managing Rancher Prime.
- One hundred fifty developers receive 8 hours of initial basic training. Rancher Prime training is also extended to all new developer hires and developers newly onboarded to the platform in Year 2 and Year 3.

**“We are converting client server applications into cloud native apps, so we are cutting these applications into smaller pieces that are running on edge devices on Kubernetes. The edges are cheaper and simpler; a single-board computer costs \$200 versus a personal computer which costs \$1,000.”**

*Manager of connectivity and internet, automotive manufacturing*

- The fully loaded hourly cost of an engineer is \$96 and averages \$85 for a developer FTE.
- In Year 1, the composite organization invests in 150 single-board edge devices at \$200 per device and grows this footprint by 10% per year.

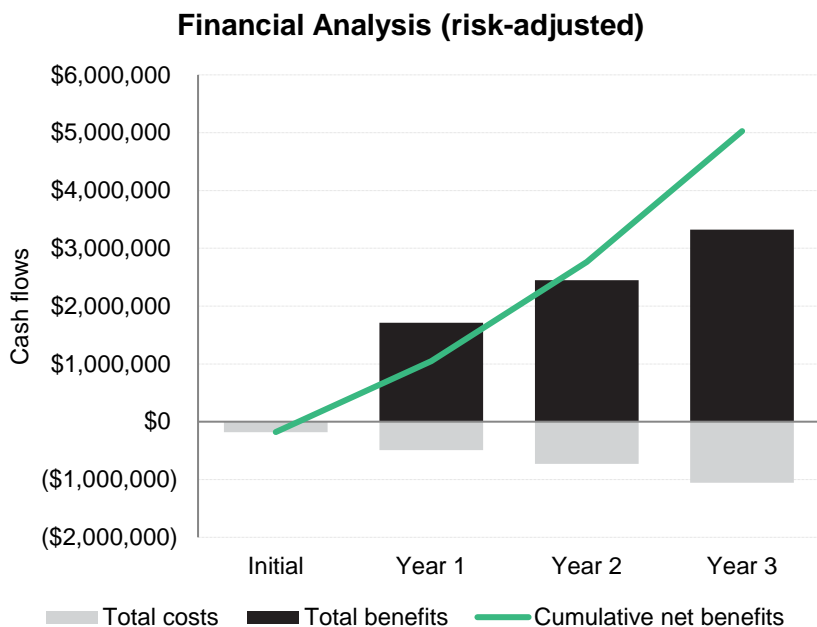
**Risks.** Forrester recognizes that these results may not be representative of all experiences, and the cost will vary depending on several factors, including the organization's use cases, the level of maturity in Kubernetes management and orchestration and its edge computing strategy.

**Results.** To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of \$355,100.

Internal Costs						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
H1	Internal implementation and Rancher management costs	Composite	\$15,200	\$7,600	\$7,600	\$7,600
H2	Internal training costs	Composite	\$102,000	\$20,400	\$80,920	\$91,800
H3	Cost of small single-board computers used as clock-in devices	Interviews		\$30,000	\$3,000	\$3,400
Ht	Internal Costs	A1+A2+A3	\$117,200	\$58,000	\$91,520	\$102,800
	Risk adjustment	↑10%				
Htr	Internal Costs (risk-adjusted)		\$128,920	\$63,800	\$100,672	\$113,080
<b>Three-year total: \$406,472</b>			<b>Three-year present value: \$355,079</b>			

# Financial Summary

## CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

**These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.**

### Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$179,320)	(\$489,838)	(\$729,360)	(\$1,057,818)	(\$2,456,335)	(\$2,022,158)
Total benefits	\$0	\$1,713,876	\$2,448,289	\$3,320,731	\$7,482,896	\$6,076,362
Net benefits	(\$179,320)	\$1,224,038	\$1,718,930	\$2,262,913	\$5,026,561	\$4,054,204
ROI						200%
Payback period (months)						<6



# Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

## TOTAL ECONOMIC IMPACT APPROACH

**Benefits** represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

**Costs** consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

**Flexibility** represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

**Risks** measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.



## PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.



## NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.



## RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.



## DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.



## PAYBACK PERIOD

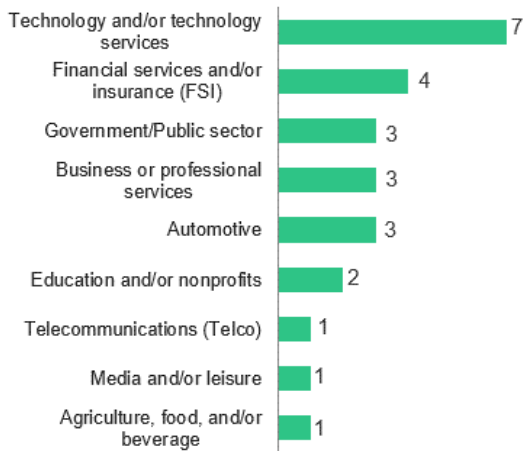
The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

# Appendix B: Interview And Survey Demographics

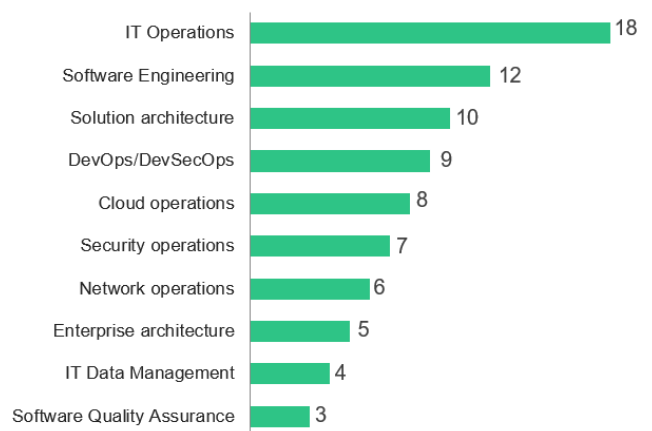
Interviews			
Role	Industry	Region	Employees
Head of manufacturing applications	Automotive manufacturing	Headquartered in Europe	200,000
Manager of connectivity and Internet	Automotive manufacturing	Headquartered in Europe	200,000
KaaS platform architect	Technology manufacturing	Headquartered in Europe	75,000
Director of DevSecOps	Technology solutions	Headquartered in the USA	200
VP of cybersecurity and DevSecOps	Technology solutions	Headquartered in the USA	200
Lead systems engineer	Internet technology	Headquartered in the USA	35

## Survey Demographics

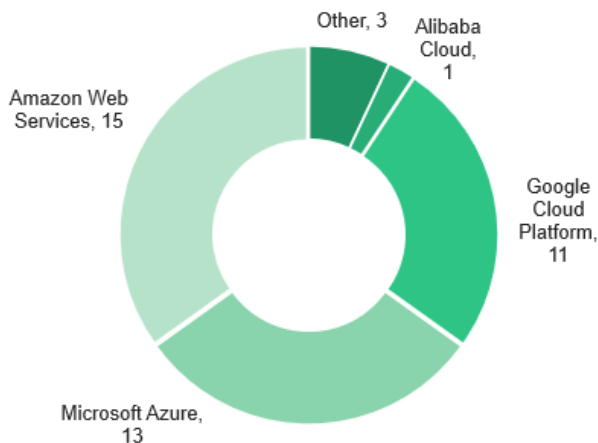
“Which of the following best describes the industry to which your company belongs?”



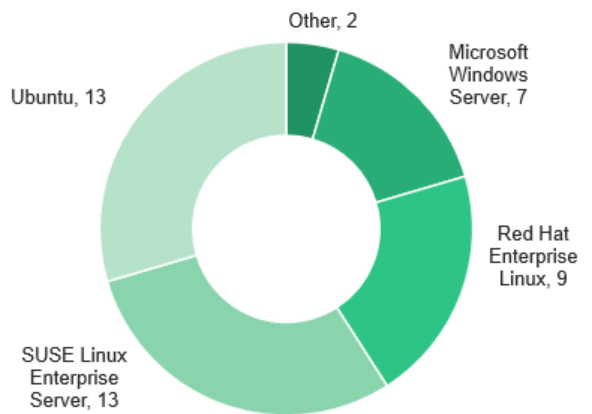
“Which group within IT or Operations at your organization do you affiliate with?”



“Which Cloud Service Provider does your organization currently use?”



“Which server operating system(s) does your organization currently use for containerized applications?”



Base: 25 Rancher Prime users  
 Source: A commissioned study conducted by Forrester Consulting on behalf of SUSE, April 2022

## Appendix C: Supplemental Information

### *Related Forrester Research*

"Navigate The Cloud-Native Ecosystem In 2022," Forrester Research, Inc., October 24th, 2022

"Assess The Pain-Gain Tradeoff Of Multicloud Strategies," Forrester Research, Inc., August 29th, 2022

"Demystifying The Fragmented Edge," Forrester Research, Inc., March 2nd, 2022

"Best Practices: Kubernetes," Forrester Research, Inc., February 2nd, 2022

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